1. Animal cells never contain centrosomes:
   a. True
   b. False

2. Organelles where bulk of the cellular respiration and ATP production occurs are:
   a. lysosomes
   b. golgi & body
   c. ribosomes
   d. mitochondria
   e. none of these

3. If a cell lacked ribosomes it would not be able to:
   a. Hydrolyze fat
   b. Carry out cellular respiration
   c. Synthesize proteins

4. The nucleus is:
   a. Surrounded by a double membrane
   b. The control center for the cell
   c. Present in eukaryotic cells only
   d. Having pores in its membrane
   e. All of the above are true

5. Osmosis occurs when a membrane is:
   a. Permeable
   b. Semipermeable
   c. Impermeable
   d. Both (a) and (c) are true

6. Proteins do not pass through cell membranes because:
   a. The membrane is made of protein
   b. They contain nitrogen
   c. They cause emulsification
   d. They are very large molecules
7. A cell in hypertonic solution:
   a. Loses water
   b. Gains water
   c. Neither gains or loses water
   d. Both gains and loses equal amounts of water

8. Carrier molecules are required for:
   a. Diffusion
   b. Osmosis
   c. Facilitative transport
   d. Active transport
   e. Both (c) and (d) are true

9. When a plant cell is placed in a hypotonic solution, the large central vacuole:
   a. Expands
   b. Shrinks
   c. Stays the same
   d. Disintegrates

10. Red blood cells will burst when placed in a hypertonic solution:
    a. True
    b. False

11. Role of lysosomes is:
    a. To carry out cellular respiration
    b. To carry out protein synthesis
    c. To package secretory substances in vesicles
    d. To carry out active transport
    e. None of the above is true

12. Animal cells are held together by:
    a. Plasmodesmata
    b. Middle lamella
    c. Tight junctions
    d. None of these

13. Diffusion is fastest in:
    a. Gas
    b. Solid
    c. Liquid
    d. Gel
14. Active transport requires utilization of:
   a. Energy
   b. Carrier molecule
   c. High temperature
   d. All of the above
   e. (a) and (b) are true

15. Diffusion of a solvent across a semipermeable membrane is termed osmosis.
   a. True
   b. False

16, 17, 18. Identify the structures at the tip of the pointers.
   a. Mitochondrion
   b. Golgi body
   c. Endoplasmic reticulum
   d. Centrosome
   e. Vacuole

19. Tiny passages in plant cell walls through which adjoining plant cells exchange molecules are termed plasmodesmata.
   a. True
   b. False

20. Plant cells lack cell membrane.
   a. True
   b. False